SIMPLE HEALTH TALKS WITH WOMEN WAR WORKERS

BY

SARAH MACDONALD

LATE MATRON OF THE SALFORD MATERNITY TRAINING SCHOOL

WITH AN INTRODUCTION BY

ETHEL BASIL JAYNE, G.B.E.

WITH FOUR DIAGRAMS

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TO

MY PROFESSIONAL SISTERS

WHO HAVE MADE THE "SUPREME SACRIFICE"

ON LAND AND SEA

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PREFACE

NOT for one moment do I wish this little volume to be considered as a medical text-book, but rather a heart-to-heart talk with my fellow-workers. Those who toil incessantly for long hours have very little time at their disposal for serious study, therefore my aim has been to help in a simple, interesting, and homely manner the pressing needs of a strenuous life.

In my capacity as Munitions Nurse I feel that such a book is not only required for the information it contains, but will also strengthen the bond of love and sympathy which already exists between workshop and ambulance.

This ambulance has, in the past, been merely a first-aid department for minor accidents, but, with the advent of women into industrial life, the department has become a very important and essential branch of Welfare Work.

It has the health of the workers in view not only for the moment, but in looking ahead for consequences which trained women, who, by reason of their profession and experience, can foresee, and are prepared to fight in spite of much opposition from those who would consider the position unnecessary.

Women are now doing heavy work to which they have hitherto been unaccustomed, and have every right to be protected by the highest skill obtainable against becoming "damaged goods," and although, in the first instance, my talks are intended for munition workers, I hope they may be of benefit to women in other occupations which the war has created.

I would acknowledge my indebtedness to the works of F. Smith, M.D., F.R.C.P., R. A. Greeves, F.R.C.S., and E. Sloan Chesser, M.B., Ch.B.; whilst my special thanks are indeed due to J. Dempster, M.A. (Hons.), for his kindness in revising my MS.

SARAH MACDONALD

DUMBARTONSHIRE
SCOTLAND, *September 1917*

INTRODUCTION

THESE practical and wholesome health talks will be invaluable to the Munition Worker and those interested in her welfare.

The great army of women who have volunteered to fight the battle of industrial life, carrying with them also the burden of home anxieties and responsibilities, will find many useful hints as to how a " King's daughter " may best safeguard her health so she may not fall out of the ranks, but may continue to supply the needs of her Country and her Home. Some on the threshold of womanhood may learn from these little talks how to avoid grave dangers and to grow more beautiful in mind and body.

Those who, like the author, have an intimate knowledge of a Munition Worker's

life, realize the fatigue and strain involved, and how they must be combated. Only by careful attention to the subjects which these health talks cover, and by such wages as can assure her a sufficiency of good food and a rest period when required, can this be done.

ETHEL BASIL JAYNE, G.B.E.,
Inspector-General of Women's Welfare for Sir W. G. Armstrong, Whitworth, & Co. Ld.

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SIMPLE HEALTH TALKS

CHAPTER I

A RETROSPECT

"To you is given in these dark days
A vast responsibility."

JOHN OXENHAM

IN these little health talks I intend to speak simply and plainly, for, being one of you, as it were, no one can realize better than myself the difficulties and dangers of this new industrial life.

I say new, for although you have been doing this particular work for over three years, it is only now we see the fruit of the seeds of ill-health which have been sown from the very beginning.

If you will just think for a moment how differently we are built, both physically and mentally, from the majority of men, you will understand me when I say that

women are indeed passing through a very critical period.

Amid the excitement arising from strange conditions of labour and the novelty of handling larger earnings, accompanied by the achievement of a once-forbidden independence, I think enthusiasm runs away with one, and women are apt to forget the extra strain, both on different parts of the body and of the nerves. The constant changing of working hours interferes with the usual habits of sleep, and the irregularity of meal-times interferes with the regular work of the stomach.

At the outset we must bear in mind that for us this war has been a series of "phases."

First there was the time when woman's share was to watch and wait, to see her husband off to the front, and to shoulder the responsibility of a dual parentage.

Next came "the call of the King to his daughters," and—what a mighty response there has been! The fervour and determination which arose in woman can indeed be compared to the feelings of "the boys" as they marched away to the strains of

"Tipperary"; the same love for country was implanted in each heart, and very soon not only bench and lathe, but almost all spheres of occupation hitherto closed to all but men were taken over by women and girls of all ages.

Feverish patriotism, if you like, reigned for the time with highly satisfactory results, and many who had lived sheltered lives were plunged along with their sister-women into a whirling Armageddon. Let those who would pass censorious judgment remember that women took up at a moment's notice trades for which men had been prepared by years of training.

Yet another phase, and a serious one, for work which demands long hours of toil in an unnatural atmosphere, with great physical and mental strain, will exact its toll.

The anxiety as to results which must be perfect is a constant strain on the highly-strung nervous system of most women, and, added to the trials of unusual toil, is the anxiety of the home, the ailments of the babies, and by no means least the troubles and burdens peculiar to our sex which, instead of becoming less, are in-

creasing in number and intensity. So I contend that if women are sometimes blamed for lack of the concentration which is accredited to the opposite sex, well, they have ample excuse.

Feverish patriotism has gone, and in its place there has arisen a dogged determination with some, and with others a passive acceptance of things which must be endured.

Not, as a famous poet says, "Seam and gusset and band," but "Steel and shot and shell" have become the daily round and common task, and in the midst of it all we dream dreams and see visions, which, alas! are likely to become only too true—visions of "damaged goods," and of ill-health from a multitude of causes, but, most deplorable of all, many ills which could be avoided or mitigated with a little knowledge and common sense. There is a well-known proverb which says, "Prevention is better then cure," and this, I think, is very applicable to munition workers in particular, and the time to think of it is *now*, not in a morbid but in an intelligent manner.

We must remember that it is the ***unusual***

which does the damage, and our aim must be to make an effort to preserve nervous and moral health as well as physical fitness. It is natural that men and women should work, for nature requires an outlet for energy, and the girl who is occupied, interested, concentrated on some definite line of work, who uses her brain and muscles in moderation, is healthier and happier in consequence. But work should be tempered with reason and common sense.

Health demands that we should have air to breathe as pure as possible, water to drink as free from contamination as possible, food to eat in reasonable quantity and as wholesome as possible, clothing to wear reasonably adapted to circumstances, and a certain amount of exercise, recreation, and sleep.

We shall talk of these things together, remembering that they are necessary for the development of men and women who can do things and endure.

It is not the slightest use trying to tell you on scientific lines how to take care of your bodies; the whole system of living and eating has been turned topsy-turvy, and the only thing to do is to try to adapt

ourselves to these altered conditions as best we can.

With that apology, therefore, for leaving the usual lines of health talks, we shall proceed.

CHAPTER II

HEALTH AND HYGIENE

"Words are small things, and a drop of ink, falling like dew upon a thought, produces that which makes thousands, nay millions, think."—BRYON

WE shall now have a little chat about HYGIENE. Do you know what that is? I will tell you.

HYGIENE is the science of cleanliness, the gospel of health; it is knowledge combined with common sense, and one of the high roads to perfect womanhood.

If we are healthy and strong we shall be able to do our work well and take pleasure in it, for we all know how different our work seems when we are feeling bright and well from what it seems when we hardly know how to drag through the day or night.

We hear a great deal these days about the *germs* of disease, and perhaps to some people it is rather a mysterious word which is not quite understood. A germ is like a tiny seed much too small to be seen with-

out a strong microscope, and, like any other seed, must be planted in suitable soil if it is to grow.

The body is the soil, but the condition of the body which is best for the growth of these germs is an unhealthy one, while in a healthy body they will either not grow at all or grow very little.

That will explain to you why it is important to keep our bodies in a healthy state, and clean houses, clean air, and clean water all mean death to the germ. I shall tell you more about them as we proceed with our talks; for the moment we are only concerned with them in a general sort of way.

It is with some trepidation, I must confess, that I speak of the problem of hygiene in the home, or what in these times constitutes a home.

The question is a many-sided one, and certainly, so far as our own district is concerned, has been an acute one also, for houses have been filled to their utmost capacity.

Again, the prevailing custom of having beds fixed within the walls without free access of air is a great drawback to health,

especially as, in times of pressure, workers of one shift have only left them in time for the workers of the other shift to enter. Think, think of the germs in those bed-clothes and the poisoned air of those sleeping apartments!

It appears to me that the only satisfactory solution of this question would be to recruit the landladies and to infuse into their minds not only the great importance of germ-carrying, but the terrible quickness and consequences of germ-breeding; then, perhaps, we might see an energetic hustling of blankets and opening of windows between these day and night shifts. It is a terrible thought that one pair of heads should sleep on the pillows for perhaps seven to eight hours, to be succeeded by another pair for an equal length of time, with no guarantee as to the health of any of them.

Well, tackle the horror as best you can, you yourselves can at least see to it that the chimney is not blocked up with screens and air-plugs, and that your window is open whilst you are sleeping. If you are afraid of a draught it is a simple matter to open the window at the bottom, and fix a piece of brown paper over the opening,

which means that the air will enter through the middle of the sash, and no draughts will be felt.

Why, fresh air is not only necessary for health but for life itself, and we need it, asleep or awake!

The air we breathe out is very different from the air we breathe in: it is warmer and damper, and contains a poisonous gas and very often disease germs.

So you see that when a number of people occupy one room, the risks are proportionately greater.

Again, the air is made impure by dust, and it *is* in your power to see that your rooms are at any rate clean and free from unnecessary accumulations. With those of you who are fortunate enough to be in your own homes a broader view can be taken, and with yourselves lies the whole responsibility of making clean healthy bedrooms where that wholesome rest may be obtained which is so necessary to satisfactorily "carry on."

If you are sleeping under such conditions as I have mentioned, you are not only running the risk of infection from others, but your general health is sure to

suffer after a time, and you wake up every day feeling tired and heavy, with no appetite for food and no energy for work.

It is quite impossible for people to be healthy when for so many hours they are breathing air which has already been breathed over and over again until it is full of all sorts of impurities.

So it is *up* to you, girls, to keep an eye on your sleeping apartments, and to take a little interest in them. I feel I can say very little on this subject, but if by chance some of the landladies see this little volume, let me beg of them to mother the girls they take into their homes, to realize that the health of the future mothers of the race is, to a great extent, in their hands, and that these girls behind the firing line are somebody's daughters, just as much as the boys at the front are somebody's sons.

Now, to keep well you must also have sufficient rest, and in these days when there is so much to be done and so little time in which to do it, the question of rest becomes a problem, as does also that of recreation. Both are absolutely necessary, but, so far as my observation goes, the recreation is taken at the expense of the rest.

That perhaps would not be a very serious thing if only the recreation could be taken in healthy surroundings, but too often, I know, the time stolen is spent in places of amusement where ventilation is bad or where air is so stale as to be simply poisonous. People like ourselves who spend so much time in factories where the air is bad—and this is inevitable where a double shift is worked—should make a point of taking as much exercise as possible in the open air, and though you may be feeling almost too tired to do anything except to go home and rest, it is worth while to make an effort for the sake of the good that it will do; the appetite, digestion, and nerves will all feel the benefit.

Rest and recreation, however, cannot be chosen for you; that lies with individual effort, for we all have different ways and notions of enjoyment. Only, I beg of you to remember that fresh air will make your bodies stronger and more able to resist germs and illness, and that light and sunshine are absolutely necessary for health, both physical and mental, in these unnatural working hours and times.

CHAPTER III

CLOTHING AND PERSONAL HYGIENE

"We've faults and failings—granted clearly;
We're frail backsliding mortals merely."

BURNS

THE question of cleanliness is very personal, I admit, but it must be gripped, so I take my courage in both hands.

Of course I know quite well that many of my readers are very clean, but I also know, alas! that many are very dirty and very objectionable to those with whom they come in contact.

Such a thing is inevitable where all sorts and conditions of people are mixed together, but I am going to tell you very plainly that many people could be much cleaner and far more pleasant to deal with if they would take a little trouble with themselves and use a little more soap and water.

If you want to be healthy you must be clean, and to have a clean body is not only a duty to yourselves but a duty to others. Have you ever thought of that ?

I am not going to say that you should take a bath every day, for I know quite as well as yourselves that the majority of houses are not supplied with baths, but every woman can have a good sponge bath regularly, and once the habit is formed, it is surprising how short a time it takes to do it.

Even a brisk rubbing with a wet towel is better than nothing, but a daily sponge stimulates the circulation and removes the dust from the pores of the skin.

The skin of your body has to be kept clean, because it has work to do: it is covered by tiny pores which help the lungs and kidneys in their work, and if they become blocked then the lungs and kidneys have extra work to do, and they resent this overtime work by setting up all manner of complaints.

Very tiny dead scales also collect on the skin and help to hinder the process of perspiring, which should go on practically unseen all over the body.

So please, girls, don't spare the soap and

water, both for your own sake and for the sake of the public at large.

Then there is the question of heads—or hair, I should say. Some grown-up women are worse than children in this respect, which is rather humiliating, you know, and the things do breed, don't they? Not germs this time too small to see, but—well, I won't say anything more about it, but do think of it, won't you? The hair needs brushing daily; even in clean people microbes infect the scalp, and the healthiness of the scalp is of far more importance than the stylish arrangement of the hair.

Next in line are the teeth, and the number of girls with bad teeth is appalling; surely grown-up women do not need to be taught to clean their teeth each day? The surprising thing is that they do need teaching, and many who really have the knowledge are just thoughtless, and although they may be quite nice in other ways, become objectionable just because they have foul breath, and all for the want of systematic cleanliness.

Acid accumulates round the base of the teeth and if not cleaned away causes a disease called Pyorrhœa, the gums have a

tendency to bleed, and often enough suppuration occurs also.

Such a condition is bound to set up a foul smell, and the poisonous matter being continually swallowed naturally upsets the stomach and invites complications.

At the moment many girls are addicted to chocolate eating, and this habit is one of the greatest enemies of good teeth, especially if the sweets are eaten the last thing at night.

I can assure you that most of the cases of toothache treated in the ambulance room could be avoided if girls and women kept their teeth and their mouths in a healthy condition ; incidentally, much indigestion and neuralgia would be saved.

The science of health also includes the clothing of your bodies in a manner suitable to circumstances ; one cannot lay down a law to suit every one, for women have various opinions as to the value of woollens and linens. Of frills and petticoats for fashion and appearance but little need be said : their wear, shape, material, and colour are governed by laws far outside the scope of the hygienist ; but I do stipulate that the body, particularly the abdomen

and legs, should be warmly clad as a protection against chills, and that the clothing should be suitable for the work in hand.

The feet, too, need consideration; it is most important that these members of the body should be kept warm and dry, as probably more colds are caught in consequence of wet and cold feet than in any other way. Women are very careless in this respect; thin open-worked stockings and trashy shoes, which are really made of brown paper, being merely inducements to many of the complaints from which women suffer.

Then again, I often see girls working at their machines in high-heeled shoes which throw the whole body out of balance; each joint, muscle, and ligament resents the treatment to which it is subjected, and the consequence is headache and backache, a ridiculous state of affairs altogether. We evidently have yet something to learn in this respect from the opposite sex, and I know that work can be done with far less fatigue if you wear suitable and sensible shoes with heels of average height. These are details well worth your consideration, both for the sake of your own health and for the output of your work.

CHAPTER IV

FOOD AND DIGESTION

"Some hae meat, and canna eat,
And some wad eat that want it;
But we hae meat and we can eat,
And sae the Lord be thankit."

BURNS

THE subject of food is indeed an important one in these days, and demands much thought if we are to do our duty to our bodies. The discussion of *what* to eat is out of the question altogether, for each one knows the extent of their own resources, but it does remove the difficulty if one understands what the body really needs.

First, we must remember that our bodies are like engines, and the food we eat is the fuel to give them energy and power to work.

By work I do not mean just our daily work, but also the work inside the body, such as breathing, the heart beating, and the brain working.

We are told that every few years the entire substance of our body is changed, and that it is from food that all the new material is obtained; surely that in itself is sufficient to make us study the question with some seriousness!

It is the building material to make bone and muscle and to repair the parts of the body which are constantly wearing out. Then again, it is not the amount of food we eat that does us good, but what we digest, and by digestion we mean the changes that take place in the food we have eaten when it is in the stomach and intestines.

These changes are made by certain juices that mix with the food, changing hard substances into fluids, and so on, so that what is good nourishes the body and what is useless is passed off, and indigestion means that the food is not so changed.

I will show you a diagram of these parts: the stomach is the bag and the intestines are like tubes of rough skin which, if spread out, would measure about 30 feet. As the food passes slowly along these tubes a very wonderful thing happens, for what is good for nourishment soaks through —just as ink will soak through blotting-

paper—and is taken up by tiny blood-vessels, passing by degrees into the large blood-vessels of the body. From that homely description you should readily understand that good food well digested means good blood, and poor food badly digested means poor blood.

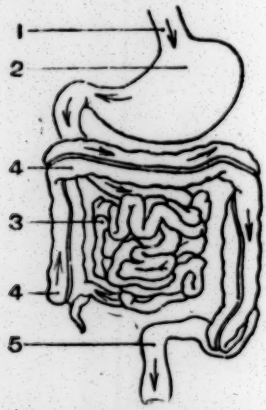

DIAGRAM I.—DIGESTIVE ORGANS. —1. Entrance to Stomach; 2. Stomach; 3. Small Intestines; 4. Large Intestine; 5. Lower Bowel.

If this process is not properly carried out, then you have constipation, headaches, and foul breath as a matter of course.

Some people bolt their food in large pieces, and are so surprised when pain comes along; they seem to expect their stomach to do all the chopping up.

Our teeth and mouth are meant to act something like a mincing-machine, and the stomach is only a bag where the prepared food is mixed up with the different juices of the body. Indigestion is also caused by bad teeth or irregular meals, and I do think women are careless in regard to their meals, both in respect of regularity and quantity, and in consequence suffer far more than men from the anæmia and neuralgia which are bound to follow.

In these days of hard manual toil you women need good substantial meals, and at regular times, and you should never commence work without taking food of some description, be it ever so little.

I know it is a great temptation to rise at the last moment when one is feeling so very tired, but in the long run it is worth while to start the day or night with food in one's stomach, for your stomach has every right to rebel if you do not give it the material necessary for its work, just as you yourselves grouse and grumble if you stand at your machine with nothing to do. Many girls suffer from indigestion continually, until they become thoroughly anæmic and the stomach and intestines ulcerated.

Now an ulcer is a mattering sore that keeps growing bigger and bigger, and eventually makes a thin place where it is situated, which is always in danger of making a little hole or perforation, as it is called. This very often means sudden death, and makes one think how many lives are lost and what a lot of useless suffering there is in the world, just because people are careless at the beginning.

BILIOUSNESS is another common disturbance of digestion generally caused by some error in diet, such as excess of food, or improper food, especially that of a rich or fatty nature. It may also be caused by decayed teeth, as the presence of even one or two bad teeth in the mouth results in the constant swallowing of septic matter, and thus poisons accumulate in the digestive canal.

The symptoms of bile are pain, discomfort over the stomach, headache, a feeling of sickness or actual vomiting, depression of spirits, constipation or diarrhœa.

Whilst the attack lasts there is nothing to be done but to allow it to take its course of thoroughly emptying the stomach, the only help being copious drinks of hot

water or hot soda-water. It can be extremely distressing, and often results in sheer exhaustion before the attack is over; it is a situation that makes one realize that "Needs must when necessity drives"; but the main thing to remember is that, when things settle and the stomach again begins to work, it must be encouraged to do its duties gradually—in plain language, you must eat in moderation until the organ recovers, for it is just as tired of you as you are of it, and perhaps is also feeling a little disgusted at your conduct.

Again, all workers should be more careful than they are about washing their hands before meals, or germs will be swallowed with the food, which will cause a certain amount of irritation and perhaps poison, whilst boxes and baskets which are used for carrying food should be thoroughly cleansed each week at least.

GOOD WATER is also very necessary for health; it is needed to help to dissolve the food and carry off the waste matter which must be got rid of.

It is an excellent plan to drink a glass of either hot or cold water every night and morning, hot water being especially good

for people who have digestive troubles, and by drinking water regularly we, so to speak, cleanse our bodies inside just as by washing we cleanse them outside.

The bowels should be kept regular and in good order; even if habits are quite regular, an aperient is necessary occasionally, for our bodies are like chimneys and must be kept free from anything that will block up the flues.

Constipation as a disease we shall speak of later; at the moment we are thinking of habits, of which excessive tea-drinking is one. Tea, as well as the want of variety in food, makes the bowels sluggish in their action; but the chief cause of constipation is that people do not encourage the call of nature—they have the desire but, unless it is imperative, they put it off, they haven't time.

This bowel trouble is to blame for half the ills of mankind, and still it is treated lightly and thoughtlessly.

In these days of difficult production of foodstuffs, what you want to remember is that the body requires certain materials: for instance, what we might call building material is found in lean meat, in the white

of eggs, and in the curd of milk and cheese ; it is also found in peas, beans, lentils, brown bread, rice, and barley; while the materials that give heat and energy are found in fat and oil of all sorts, in the yolk of eggs, sugar, cream, butter, some kinds of fish, and cocoa.

It is very important to get plenty of variety in our food, and potatoes need not be so sorely missed if beans and lentils are made use of : these are almost like meat in the amount of nourishment they contain, and it is a pity they are not more appreciated.

Rice, too, is invaluable and can be cooked in a variety of ways, whilst fruit is still fairly cheap, if eaten as a food and not as a luxury.

However, the choice of food is in your own hands ; what I would prefer to teach you is the necessity of wholesome food, well digested, with which you must help your body through the period of special strain which it is called upon to bear.

CHAPTER V

SOME CONSEQUENCES OF TOIL

"If you have to fall in the battle of life,
Battered and broken and beaten,
Better to fall like a smitten oak,
Than a reed which the frost has bitten."

A. G. HALES

IN this little talk, by way of illustration we are going to consider ourselves a regiment at war, not behind the firing line as we are in our practical every-day work, but on active service, face to face with a legion of lurking enemies who will deal out some very crushing blows to us if we are discovered off our guard.

The consequences of toil are foes well worth fighting, and if we can keep them at bay we add in no small measure to the success of the "Allied Cause."

Let us first consider our strongest and most active opponent, namely, INDUSTRIAL FATIGUE, which can be both physical and mental.

The body in itself is like a machine which, practically unconsciously, is being driven at its highest pressure, and in the machine are various little wheels, by which I mean the nerves, the whole nervous system, and the muscles. At times these wheels become clogged and tired with their efforts, with the result that there is a failing in the powers of concentration, tools are spoilt, scrap is made, and incidentally foremen's tempers ruffled considerably, although I may tell you even foremen are attacked by this enemy sometimes. Indeed, with them the symptoms can be even more serious than with you.

These symptoms, trifling at first, grow in magnitude, until you are in a state of reduced efficiency and lowered health and become an unsatisfactory worker altogether.

NERVOUS AND MENTAL FATIGUE may spring from maintained use of the intellect and observation in work which needs too close attention or is monotonous or automatic.

BODILY FATIGUE means exhaustion in the muscles, and the first sign is diminished capacity; but it is not in my province to say much of the effect on your work, as I

am chiefly concerned with the effect on your health.

The work must be done, the "boys" are depending on your efforts to supply them with ammunition, and we, who act as your Medical Officers, are ready and willing to help you by all means in our power, but bear in mind that the enemies in your midst must also be attacked by yourselves individually. Life at the moment is rapid, complicating, and exhausting, but the human mind and body are capable of great effort if encouraged in the right way; will-power is a tremendous help also, but at the same time a rest is needed if work becomes monotonous, automatic, and irritating.

Better a day or night of rest than to allow oneself to drift until weeks are needed to set things right again.

Rest, recreation, change of scene and sometimes change of machine are the things needed by the mental department of the body, and eventually the mind will recreate itself.

Relax the very minute work is done; let the human machine forget that such things as slaughter machines exist. Many are doing more than they are physically

able to accomplish and ignoring the consequences, the result being that the nerves of industrial fatigue are the first weak spots in the "first line" in the battle of the women.

Take care, then, that the enemy does not break through; remember that good food, sufficient sleep, moderate recreation, and an occasional rest from work are the essential weapons with which you must defend yourselves, recuperate, and store energy for the future.

If your "first line" be broken, then sure enough you will find your "second line" attacked and yourself in the grip of neurasthenia, which is a general exhaustion of the whole nervous system, giving rise to a variety of symptoms, the most distressing of which are mental.

Neuralgia perhaps comes along, and this is an extremely painful affection of a nerve or nerves by which women are far more frequently attacked than men, and is very largely a disease of debility, indicating that the nervous system is run down.

Chill or a decayed tooth may also bring on an attack, but often enough it is poor food, fatigue, and ill-ventilated homes and

workshops that are the causes. The remedy for neuralgia is obvious, *i.e.* good food, fresh air, tonics, milk, and for the seat of pain hot poultices, bags, or flannels.

ANÆMIA comes next as a dangerous enemy in which the blood is deficient in red colouring matter or "hæmoglobin," and the whole body suffers in consequence.

It is the cause of many cases of headache, nervousness, and dyspepsia, the chief symptoms being pallor, weakness, and lassitude, and a girl in this condition will have her energy impaired all the time.

Some of the causes are strong tea, improper diet, badly-ventilated rooms, lack of sunshine and fresh air.

Well, these are all to be found in the conditions of factory life, and the very moment you begin to feel run down you should obtain a good tonic and practise some of the hygienic laws of health which I am trying to teach you in these little talks.

HEADACHES. — Nearly every woman whose health is not what it ought to be suffers occasionally from this affection, which is really not a disease in itself but the symptom of a disease.

There are three main causes of headache, *i.e.* :—

No. 1. Nerve strain or mental over-strain and nervous fatigue.
„ 2. Eye strain.
„ 3. Auto-intoxication or self-poisoning.

We have already discussed the first, and you know that the antidotes are rest, good food, and moderation in all things. In the second, skilled advice and spectacles are called for; whilst the third rests entirely with yourself, the cause being the presence of toxins in the blood. Toxins are poisons, and when the digestion is out of order these poisons are found in the intestinal canal and are absorbed into the blood; naturally, the consequence of impure blood is headache, and an effective aperient is needed to clear the system.

The article of food which has been responsible for the condition should be avoided, meals should be taken at regular times and not in snatches, and sufficient time spent over the meals for thorough mastication in readiness for digestion.

WOUNDS.—Accidents large and small are an everyday occurrence in munition

factories; the large ones do not concern you, but the small ones concern you very much, and the great risk even with the homely "skelf"[1] is the introduction of dirt and germs which cause suppuration or blood-poisoning.

Unless a wound is made clean and kept clean, it is liable to become poisoned, and it is in the prevention of "sepsis" that the ambulance room has such an important part to play in regard to accidents; but often enough the work of this room is quite undone by careless people, who will not learn how to be clean and use a little common sense.

These steel splinters or "skelfs," for instance, seem very trivial to you and are often removed by obliging people in the shop with ordinary pins and brooch pins, after which comes a visit to the ambulance and a tale of "festering."

Think of the difference if a visit is paid to Nurse straight away, for there "ritual" is practised, and the same care given to a minor as to a major injury: the splinter is removed with a needle which has been boiled and sterilized, the "wee" wound

[1] North-country expression of splinter.

treated with antiseptic and covered up as a protection against germs.

Well, what is wanting? Why, just a little plain common sense among you girls, just a little forethought, for it is from such trivialities that big things spring. The various shops, shells, and machines are a happy hunting-ground for energetic little germs of every description, and you yourselves are very much to blame through your carelessness for consequences so far as blood-poisoning is concerned in small wounds, burns, and scalds. A suppurating wound, however slight, should be reported without delay, for if infection from outside is met by infection inside the result is disastrous indeed.

THE EYES.—Eyesight is one of the most precious possessions we have, and yet the majority of people are fearfully careless in regard to it.

In this industrial life the strain of the eyes is tremendous, the close attention to such work as "wavy serrating" and the long hours of work in the artificial light being exceedingly trying. The result, of course, is headache, and especially so if the eyes are not equally strong;

but I think many men and women suffer far too much from headaches which could be cured in a short time by suitable glasses.

I am most anxious that you should understand how very serious injuries to the eyes may become, for it seems to me they are treated far too lightly.

The bits of steel and copper flying about the machines find a ready target in the eyes, and, as you know, some of them are hot and cause extremely painful burns.

Now these burns are not like burns on any other part of the body, for the eyes are particularly sensitive, and the mucous membrane which covers the inside of the eyelids, and is known as the conjunctiva, is very delicate.

As a rule the corners nearest to the nose suffer the most, and if the parts begin sloughing then what is known as the tear-passage is involved, or troublesome adhesions occur. So please do not be afraid to pay frequent visits to the ambulance room with these injuries, where they may receive the attention they require. Then there is the question of what is termed a "fire" in the eye, and I should like to disperse the idea which some people have,

that once a "fire"[1] is removed from the eye the danger ends. It may seem so at the time, but the consequences may be gradual and delayed, and when the time comes for a verdict as to the sight, no connexion with the "fire" is thought of or the damage it has done to the surrounding corneal tissue, the instance having probably been forgotten.

The very moment a foreign body is felt in the eye a visit should be paid to the Nurse. Unfortunately, girls often appeal to their companions for assistance, and so an additional risk is added to the injury by the eye being handled by unskilled and dirty fingers. The examination of an injured eye is always difficult, because the pain, being of an acute nature, causes a reflex action of the muscle, resulting in a screwing up of the eyelids; therefore let me again say that the eye should not be interfered with in the shop.

The "fire" may be embedded so deeply in the corneal substance as to project into the anterior chamber, or close to the

[1] A north-country expression for very small bodies which usually lodge on the eyeball or in the vicinity of the cornea.

posterior surface of the cornea, when no attempt whatever will be made to remove it, but the case sent at once to an ophthalmic surgeon, who is the only person who should take the responsibility of deeply embedded "fires" and other foreign bodies.

There may be a perforated wound of the cornea so small as to be easily missed, and yet there is no time for delay if the sight is to be considered at all. When a foreign body has been removed from the cornea an abrasion of the surface is usually present which will need irrigation at least three times a day, and corneal ulcers of considerable depth and extent may be the result of even very tiny "fires."

So you see these injuries are not so simple after all; the ambulance understands its business quite well, and is remembering the future in which women will suffer sufficiently without the additional affliction of impaired eyesight.

STYES.—These are minute boils at the root of an eyelash which cause redness, swelling, heat, and pain; they are associated with poor general health, bad hygienic conditions, and eye strain.

Local treatment consists in bathing the eyes with hot boracic lotion, and when suppuration has occurred, removal of the eyelash forming the centre of the boil will allow the matter to escape. The eye should be bathed regularly until the inflammation subsides, and the general health and hygiene will need strict attention.

VARICOSE VEINS.—A vein is varicose when it is enlarged and unequally dilated and produces feelings of fatigue, heaviness, and discomfort, with coldness of leg and foot. Women standing at their machines for long hours are very liable to this affection, and unfortunately it is extremely common.

Well, at the present moment, to prescribe rest is out of the question altogether, but relief can be obtained if a crêpe bandage is regularly worn and applied evenly from the foot upwards.

This should be applied before rising from bed, whilst the limb is in a horizontal position; and the bowels should have every attention. If during your working hours you should have spare moments, try to lift the leg from the ground, if possible on a level with the body.

RUPTURE OR HERNIA.—This is a pro-

trusion through the abdominal wall and under the skin of a part of the intestine which may result from muscular strain.

It forms a lump beneath the skin, and the danger is due to the fact that the intestine is forced through quite a small ring, and thus serious and acute symptoms arise from constriction or strangulation, as it is called.

It is a condition which may occur at any time with women who lift heavy shells and work heavy machines, therefore you will remember that if you have abdominal pains accompanied by sickness, and for which you cannot find a cause, it is your duty to report immediately.

SORE THROATS are common when machines give off dust and fumes ; they may be of a mild type, causing dryness and discomfort in swallowing, or they may be severe, with ulceration and rise of temperature.

Now, girls who work on these particular machines should always try to breathe through their nostrils and with the mouth closed. This will lessen the danger considerably, although, even then, the dust may irritate the nose and air passages either simply as foreign matter or by conveying

germs to the portals of entrance to the body.

TONSILLITIS, or an inflamed condition of the tonsils, and chronic enlargements of the tonsils will most certainly result if mild attacks are continuous and neglected.

It is an excellent habit to gargle the throat with warm water regularly when cleaning the teeth at your usual toilet hours, and if the throat is sore, be it ever so little, a pinch of salt should be added. If the soreness becomes acute then a little rest must be taken from that particular work, a good tonic such as iron and quinine will be necessary, with nourishing liquid foods and inhalation of friar's balsam at bedtime.

BOILS are small abscesses, collections of pus and matter under the skin, and denote a run-down state of health.

They are also due to sebaceous glands and hair follicles becoming blocked and infected with soiled clothing and overalls. Boracic fomentations or poultices should be applied, the bowels regulated, and attention given to the general laws of health.

INDIGESTION we have already considered under the question of food, but as it is often the result of over-worry and mental

strain, it will do no harm to think of it a second time.

It is caused by too little or excess of acid in the stomach, and if it becomes really bad entirely unfits people for their work.

The longer treatment is delayed the greater is the difficulty of effecting a cure, and I am afraid a large number of men and women will suffer very much from this complaint as a result of the constant changing of meal-times and of carried food.

The symptoms are pain and discomfort in the stomach and across the shoulders after eating, distension of the abdomen, and general depression. Altogether, if it becomes chronic, life becomes a burden and man a slave to his stomach.

So you see the first symptoms should never be neglected. Three simple meals should be taken each day, eaten slowly and chewed thoroughly, whilst during the week-end preceding the changing of shifts, preparation for the change of meal hours should be made by giving general attention to the bowels.

CONSTIPATION, or the absence of regular action of the bowels, is perhaps the most common complaint of the average person.

Some are predisposed to constipation, others invite the trouble through sedentary habits and lack of exercise and indulgence in unsuitable food, whilst chronic diseases, such as anæmia, diabetes, and liver complaints, bring constipation in their train.

In industrial life it may be caused by weakness of the abdominal and intestinal muscles.

Plainly defined, constipation means that the solid waste matter is not regularly expelled from the body, and its retention naturally gives rise to the unpleasant symptoms of headache, coated tongue, foul breath, loss of appetite, and fatigue.

Girls whose work necessitates long hours of sitting are particularly liable to the complaint, and should try to train themselves to regular daily habits. Every one should drink water to flush out the bowels, and the very moment the symptoms I have mentioned are noticed, an aperient should be taken to check its course. Water in which senna pods have been soaked and confection of senna are both convenient laxatives; liquorice powder is a good old-fashioned remedy, and a most

effective but nasty draught is made by grating a little Turkey rhubarb into a tumbler of water, to which a Seidlitz powder is then added.

This last remedy is extremely good for fatigue.

Naturally our food has much to do with constipation, and once any particular thing is found to have that effect it should rigorously be avoided.

DIARRHŒA may also be classed among industrial diseases, as it is often a result of a chill when the body is fatigued. Warmth, rest, and a dose of castor oil are called for, food should be limited and taken cold or tepid. If the attack is severe and accompanied by collapse, an excellent remedy and stimulant will be found in one tablespoonful of brandy and the white of an egg well beaten together.

PILES OR HÆMORRHOIDS are a varicose or distended condition of the veins at the exit of the lower bowel, and the chief causes are constipation and want of exercise. They can be extremely, in fact I once heard some one say exquisitely, painful, and I think that is an apt description.

Headaches, faintness, and anæmia are

the usual accompaniments, and great care is needed to regulate the diet and bowels ; drastic purgatives only aggravate the condition, but great help can be given by drinking hot water several times a day and by taking outdoor exercise. If you are sitting at your work all day long, you will be wise to choose a hard chair, however alluring a soft cushion may be, whilst the burning and itching which is usually present can be relieved by the application of hazeline or hazeline cream. The application of a cold compress is a simple but valuable treatment, whilst glycerine suppositories will empty the lower bowel and at the same time soothe the soreness of the veins.

RHEUMATISM may be a consequence of working constantly with water, the hands being in a state of dampness, if not actually wet. If there is pain, turpentine and other liniments are useful, or the joints may be painted with iodine. Medical advice should be sought at the commencement, before the disease has taken a firm hold of the system.

INFLUENZA. — Although this is not strictly an industrial disease, I feel im-

pressed to speak of it, as, from time to time, we have epidemics in the factory, and I have been very much surprised to see girls in the grip of this complaint stick tenaciously to their work without the slightest thought of after-effects.

Now influenza is an infectious fever which occurs in epidemics ; it is extremely dangerous because of the great prostration it causes, and the fact that it is liable to be followed by pneumonia, rheumatic fever, and heart failure.

The disease is due to a germ which is found in the secretions, and which passes into the atmosphere and mingles with the dust. In going about one's daily work it is almost impossible to avoid coming into contact with the germs of infection, and the only way to escape them is to keep the general health at a high level, avoiding anything which lowers the vitality and induces colds, to guard against mental and physical fatigue, and to avoid inhaling other people's breath when an epidemic is about.

Once the disease is contracted, bed and light diet is the best procedure, and, believe me, there is nothing heroic in sticking to one's work and infecting every

one around. Equally foolish is it to return to one's work too soon, for a relapse is often more serious than the original seizure.

Fresh air and sunshine are the best tonics, and disinfectants after convalescence.

I would ask you to think seriously of all these enemies which you are likely to encounter; many of them appear to be quite simple, no doubt, but, simple as they are, they can also be extremely mischievous and harmful. Don't wait until they attack you, but be on the offensive, and if by chance fate overtakes you, and you find yourselves attacked, then—well, show your mettle and fight the foes for all you are worth.

The success of your work lies entirely in your health, bodily and mental, and your actual work is vital to your country and to your fellow-creatures.

I know you are sometimes tired and weary, I know you are depressed and just a little irritable at times, I know the days are long and the nights still longer, but—it is in the orders for the day that you should keep fit to "carry on," and, well, we are soldier women, you know, so we must obey orders and rally round the flag.

CHAPTER VI

NIGHT WORK

"Persevere, it is not thine to guess
The measure of thy worth and usefulness;
Though purposeless thy life may seem, yet still
'Tis only thou maybe that niche may fill."

H. M. B.

THE popular cry is, "Oh, how I hate the night-shift; it comes round far too quickly!"

So it does, but we must "fall in" like good soldiers. Night work is one of the biggest trials of this industrial life; the atmosphere of the shops still laden with the breath of the day-shift just away, the artificial light for twelve long hours, the unnatural tension and apprehension, not of what actually happens but of what may happen, are all extremely trying to the temper and to the nerves.

The creepy-crawly feeling which only night can bring; the constant strain of the nerves in the wintry nights when

aircraft is the danger; the tense moment when from a blaze of light the shops are suddenly plunged into darkness with just a glimmering lamp here and there; the fear of machinery, still running in the darkness; the awful silence, presently broken by a buzz of voices, with perhaps a groan from some poor exile who has already suffered much: these are trials never to be forgotten, and are bound to leave their mark on the general health and nervous system of those who pass through them.

What has become of the old notion that night air was injurious, I wonder? The simple fact is that there is not time to think of it, and thus, like many more notions of the kind, it has vanished into oblivion for ever, and thousands of human beings are working energetically through the dark hours of night and break of day with apparent unconcern.

Now you must understand that during every moment of your life your body is undergoing wear, tear, and repair, and that two low-tide points occur in the vitality every twenty-four hours, the one at about five in the afternoon, the other at about

five in the morning, and these are partly due to exhaustion. The evening fall is accompanied by a rise of temperature, that of the morning by a fall of temperature, and as the night nears morning the atmospheric temperature is lowered also, with the result that the body is below par, as it were, at that time.

All this points to something being needed to help the condition and to the need of nourishment to support the lowered vitality. Those girls, therefore, are wise indeed who make a point of taking some refreshment during the early morning "minutes."

The chief consequences of night work are headaches and indigestion, the first arising from the deprivation of fresh air and sunlight and probably sleeplessness, for it is no small matter to grow accustomed to sleep night or day, especially with older people of settled habits.

Indigestion very naturally results as a consequence of warmed-up food, alteration of meal hours, and the habits of the bowels, and unfortunately one is just beginning to feel settled, when, heigh-ho! over we go again to the other shift; truly a remarkably trying life! It is scarcely

one for which advice can be given, and I feel all I can say is, take sufficient rest, take walks in the sunshine, be careful in your choice of food, and above all, prepare yourself for the turn-over by taking an aperient during the end of the week.

I wonder shall I be forgiven if, for a few brief moments, I make a digression from the cold practical facts to speak of these nights in another fashion ?

Clever pens, from time to time, give us descriptions of the doings of our men on the various fronts, stories which we read with great interest and treasure in our minds, but of the "back of the front" little is said, and yet here, too, life has its pathos and its battles, fought by thousands who so short a time ago were sleeping as peaceful citizens in their beds instead of grimly working with death-dealing machines.

We have become rather used to war, have we not ? and yet I know well what lies underneath that settled appearance, and that long trials smooth the surface only ; the undercurrent is rippling, but ready to break forth once again into a rushing torrent at a moment's notice.

A glance through the window and the moon and stars tell us that the world should be asleep, but a glance into the various workshops tell us that the world is very much awake; the flapping of the countless belts, the roar of the furnace, and the constant buzz of machinery, all tell their own tale, as do the honest sweat pouring from the begrimed faces of the men folk and the earnest though tired looks of the girls.

Yet, in spite of our manifold tribulations, we are a fortunate country. I think so when at times my mind goes back to another arsenal in a foreign land, and I mingle again with a stream of people, old and young, each carrying a tiny lamp or candle—for it is dark and late and very dangerous to cross the narrow little bridge which spans the river.

I hear once more ringing out of the darkness the challenge: "Stoy! Co-e-da?" and the password answered by each as they pass through the gates guarded by great fine fellows with bayonets fixed.

I see over and over again the sad faces of those little Serbian girls who stuck to their machines in spite of invasion, who

were twice driven out by the Austrians, and yet returned a third time to their posts until finally driven out of their country.

What courage, what nobility, has been shown by the women of all lands! History will record it all in due time, but rest assured that individual effort, though seemingly unnoticed, will be recorded in that "sometime, somewhere" of the future.

The long hours are wearisome and exacting, at times body and soul feel they can do no more, but remember, girls, just as the day follows the night, so there is reaction in the body, and there is pride in the knowledge that you are invaluable to your country if your work is done well.

Never in living memory will these night-shifts be forgotten; hands will be seared and scarred with wounds, shoulders will be bent and rounded, hearts will be broken, and yet—I will ask you a question, would you have missed them? would you? No! a thousand times no!

CHAPTER VII

NATURAL FUNCTIONS OF OUR SEX

"What does our country need?
Women, strong of soul, yet lowly,
With that rare meekness, born of gentleness,
Women whose lives are pure and clean and holy,
The women whom all little children bless."

ELLA WHEELER WILCOX

OUR talk this time is of the special functions of our sex, and before I can tell you of the effects of your work on the organs which perform these functions, you must understand them as they naturally are. Therefore, I am going to teach you something of the construction of these particular parts of your body.

There need be no false modesty, for we are all built the same way, and the same things happen to each of us, and in any case we must try to right the wrong of ignorance.

A great deal of blame really rests with mothers who, either through false modesty or indifference, allow their daughters to

grow through the most critical stage of life, when they leave childhood behind and become women, with no idea of the importance of the changes taking place within them.

Old customs, many of them incredible and ridiculous in the extreme, are still carefully nurtured, all for the want of a little enlightenment. I am quite aware that many people say quite casually: "Oh, girls know enough these days." They do, I grant you; but is it the kind of knowledge they ought to have? Is it the kind which makes them respect their bodies, or is it the kind which teaches that the bringing of children into the world and the difference in the sexes are funny things to be treated as a joke?

There is a mystery about all this in a popular way, but, believe me, it is a mystery of the wrong kind, and coarse jokes and nasty insinuations as to the use of the body tend to diminish appreciation of our great gift of life-production.

The present freedom and intermingling of work brings you into constant contact with the opposite sex; somehow the barriers are swept away and familiarity

reigns supreme. Please do not mistake me; I am not adding a rider on the menfolk, for many girls are only too ready to meet this familiarity more than half-way, as the saying is, but the woman who prizes her virtue stands appalled, for she sees herself surrounded by the most insidious sorts of example, which sap away the very foundations of a good life—first the innocence, then the unselfishness, then the decency, and this is the thing that fosters in the mind the notion that there is a mystery in the sexes.

Let me be plain with you; let me tell you that your body is the temple of life, that each item of your body has its own special work to do, and just as you have eyes to see with, so you have organs which are meant for the special duties of procreation. Life is full of tragedies, and when you lose sons and daughters in sickness and in war, or when you learn you are to have no little ones of your own, ah! then you know that procreation, even at the greatest stretch of imagination, is not a joke.

Have I convinced you? I hope so, and repeat, with all the fervour I possess, that

your body is the temple of life, and if you are perfect in these special endowments of our sex, I ask you to be jealous that you guard them as precious jewels.

As future mothers of the race I would have you understand well the constitution of your bodies and what your wonderful mechanism is capable of doing, for it is through this lack of knowledge that women suffer so much and make such hopeless muddles of motherhood.

No doubt you all know that you have a WOMB or UTERUS, also that you have OVARIES.

Now the womb is only a small organ, quite different I know to what you have imagined it to be; it weighs from 1½ to 2 ounces, and in size is 3 inches long, 1 inch thick, 2 inches wide.

The ovaries are small too, about ¼ of an ounce in weight and 1½ inch in length, or just a little larger than the common kitchen nutmeg. Small as they are, however, they may be called the chief organs of reproduction in the woman, as their function is to produce the germ-cell or egg which, when fertilized by the male

sperm-cell, forms the embryo from which a human being is developed.

I can scarcely explain that fully in talks of this description; it is sufficient, I think, if you understand the organs properly, and get clearly into your mind what their peculiar functions are.

MENSTRUATION, popularly called being unwell, is really Nature's washday, and should be a perfectly natural process, but uterine diseases are becoming so common that women entirely exempt from them are rarely to be met with, the majority suffering in a greater or lesser degree.

This menstruation takes place periodically until the age of forty-five or so—not a very pleasant prospect, I admit, but there the fact is, and we know that it is this very cycle of changes which puts us women at a disadvantage in many pursuits of life in which we would fain take a part.

It is also from this cycle of changes that women are suffering just now in this industrial crisis, especially in munition work, where heavy machinery causes great strain on the abdominal muscles.

To go back to the OVARIES and their germ-cells; every time a woman is unwell,

one or more of these cells will ripen and burst, pass along the tubes leading to the womb, through the womb, and on through the vagina or passage.

At the same time a portion of the lining of the womb is cast off, but I think, to make that quite clear to you, we must first think of this menstruation as divided into three periods.

The first is the constructive or preparatory period, lasting about a week before the flow appears, and what happens is that the heat or temperature of the body is higher, the pulse varies, the back aches, and there is congestion of all the blood-vessels in the lower parts of the body.

The second or destructive period lasts about five days, during which the cells burst and the blood and mucus escape.

The third or reparative period, of five days also, during which everything returns to its original state.

I hope you quite understand that, because we must think of these periods separately and how we can help them.

Take the first or preparatory stage ; you very probably have headache, abdominal pain in either the centre or at the sides of

the abdomen, you feel hot, uncomfortable, and very likely irritable and out of patience with your work and the world in general.

Well, in many cases these symptoms can be considerably relieved by quite simple measures and common sense: by simple measures I mean warm baths at bedtime; if you cannot get a bath, put your feet in hot water before getting into bed, and make good friends with a hot-water bag, which is really invaluable at these times.

Most important of all, see to your bowels, for I can assure you that a good effective aperient works wonders.

By common sense I mean that care should be taken to avoid standing about in wet weather, to wear sensible shoes and stockings, to ensure warm feet, for thin open stockings and trashy shoes are more to blame than you think for pain at these times and for those "cramps" I am so often hearing about.

During the second stage it is even more necessary to keep the feet and abdomen warm, and if women would only take a little trouble with themselves, and not be so helpless, they could indeed save quite a lot of unnecessary pain.

I find there is a very popular notion that a woman who is unwell should not take baths, a notion which I may at once say is ridiculous. There is nothing more helpful than a warm bath, but it should be taken at bedtime, when there is no risk of taking a chill; there is also another aspect of that question, which is, that if cleanliness is advisable at other times, then it is absolutely necessary at the time of the period, both for your own comfort and the comfort of others, for an unclean woman can be very objectionable indeed.

At the second period many girls are troubled with bile, a very distressing condition, for which very little can be done except to rest and keep warm until the attack has passed off.

I must say that I have been very much surprised during the last few months to find that a great number of women take laudanum periodically. The habit of spirit-drinking is harmful enough, but drug-taking is absolutely wicked and will have very serious consequences. I do wish I could impress upon you the grave mistake you are making and the future trouble you are preparing for yourselves.

I am not talking about extreme cases, but things which come under my everyday observation.

Before we leave this second stage I will explain the phenomenon in a more homely way, thus: the blood which passes off exudes from the congested vessels of the womb and from its sides, just as profuse perspiration sometimes bathes the brow, trickles in rivulets down the face, and runs in a stream from the chin.

If you imagine that taking place within your body, you will readily see how it can be hindered in its work if you take a chill, and how it can be helped if you keep yourselves warm. Why, this self-care is half the battle! I do not want you to become "faddy" and to be extremely sorry for yourselves, for nature must be reckoned with, and will-power to bear pain is one of woman's assets, but I do want you to learn to render first-aid to these precious portions of your body and so save yourselves a lot of pain and suffering.

During the third stage the organs are recovering from their special work, and still need a little consideration; just as you leave your machine in good order for

the other shift, so must these organs be left in good order in preparation for their next shift, for, according to your treatment of them will be the amount of suffering dealt out to you at the next period.

Reasonable rest and nourishing food should not be neglected, whilst "moderation in all things" is an excellent prescription.

Remember that warmth to the feet and abdomen will help the flow, mustard leaves applied to the nape of the neck and a good aperient will help the headache, fasting for a time will help the bile, warm baths will help everything and make you wholesome.

Brandy and other spirits are unnecessary and injurious, whilst laudanum and such-like drugs are simply disastrous in their consequences.

You girls who work on the heavy machines must try to save yourselves as much as you possibly can at these periods; study your abdominal muscles a little and remember that even in lifting heavy weights there is a certain amount of "knack," which does not mean muscular strength.

Do not be too ready to give in or to

complain, but at the same time do not be too tardy, if you think you are really harming your body, for this unusually hard toil you have undertaken for the honour and glory of your country is, I can well assure you, tempered by the sympathy of those who have your health and welfare at heart.

CHAPTER VIII

SOME DISEASES OF WOMEN

" The mighty conflict which we call existence,
Doth wear upon the body and the soul.
Our vital forces wasted in resistance,
So much there is to conquer and control."
ELLA WHEELER WILCOX

I HOPE our previous talk has taken root in your minds, for I now want you to understand a few abnormal conditions, some of which may be a direct consequence of strained or relaxed abdominal muscles, the strain or relaxation having been caused by the lifting of heavy shells, by heavy machines such as are used for " ripping " and " rough turning," by constantly tightening the " chuck," and by the polishing of heavy shells.

The work must be completed, the machines must be used, what then is to be done ?

I do not want to frighten you or to make you imagine you have these complaints

already, but I do want to warn you and to encourage you to take reasonable care.

If you look closely at the diagrams you will see quite plainly some accidents which may very easily take place. No. II. shows you the organs as they appear in their natural state; No. III. the womb falling on to the bladder, a condition known as anteflexion; No. IV. the womb falling on to the rectum or bowels, known as retroflexion.

Either of these affections can be very serious indeed, the one interfering with the work of the bladder, and causing frequent micturition, or passing of urine, the other obstructing the work of the bowels and causing chronic constipation.

Add to these evils a discharge, chronic inflammation and congestion of all the parts, and you have a condition which simply makes existence a burden.

Now the thing is to take time by the forelock, and all women who work on heavy machines should regularly massage their abdominal muscles.

This is best carried out when lying down, and need only take a few minutes each day. I know you think you haven't time,

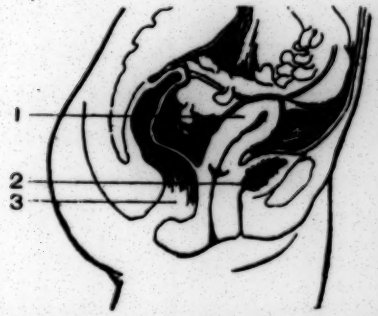

DIAGRAM II.—The organs to which allusion is made—1. The Womb; 2. The Bladder; 3. The Bowels in their natural state.

DIAGRAM III.—1. Uterus; 2. Bladder; 3. Bowels with the womb falling on to the bladder.

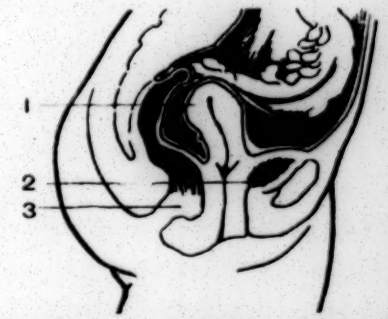

DIAGRAM IV.—1. Womb; 2. Bladder; 3. Bowels with the womb falling on to the rectum or bowels.

but in these days of hustle I think you could turn to good account those few minutes which, on waking up from the land of nod, are usually spent in thinking, if not in voicing, regret that the time has arrived to get up at all.

At the end of the week surely more time may be given to this simple but valuable performance, and brisk walks in the open air will strengthen the muscles considerably.

It is absolutely necessary for the bowels to be watched, and I am often surprised how indifferent girls are in this respect.

Such symptoms as frequent micturition and chronic constipation, accompanied by the feeling of a heavy weight in the abdomen, should be reported at once and advice sought, and, if you please, not only sought but carried out.

PROLAPSE of the womb means that the organ occupies a lower position in the pelvis than usual, but this affection is more common in women who have had children. The symptoms are very similar to anteflexion and retroflexion, and, apart from accidents, can be caused by the habit of drug-taking to effect abortion. The curious thing is that so many women suffer

from these complaints and take them as a matter of course, and it is even more surprising, when we consider they are practically never free from backache, which sometimes becomes almost agonizing, and is the means of turning many a hard-working woman into a nagging drudge.

It is so difficult to persuade women to seek the necessary medical advice: they do not seem to realize that they can be relieved of their miseries.

LEUCORRHŒA OR THE WHITES.—This is also an extremely common complaint, which begins as a discharge of watery fluid, becoming later thick and yellow. As it grows more profuse it causes great irritation and chafing, which amounts at times to little less than agony.

Local applications, often of a greasy nature, are tried in desperation, but these only serve to aggravate the condition.

This is a true sign of weakness and anæmia; presently faintness and lassitude follow, and the constant drain, if not checked, leads to general uterine derangement, hysteria, and consumption.

Tonics are absolutely necessary, fresh air, wholesome food, and great cleanliness

are called for, with frequent bathing with warm water and carbolic soap, and if douches are required, the Ambulance Nurse is only too pleased to instruct you as to their use. Perseverance is necessary, too, for, as the disease has been gradual in its onset, so it will of necessity be gradual in its cure.

Any discharge whatever should be treated, for, if neglected, ulceration or inflammation of the womb, ovaries, and passages will naturally follow. Cleanliness is essential, and especially is this so in the case of married women even in ordinary everyday life; but I am afraid this is a sadly neglected part of one's education, the majority of women preferring to suffer in silence rather than to discuss these matters openly.

An impossible situation, surely! This mistaken reticence is decidedly a great drawback to the advancement of health questions, which are so vital to-day.

DYSMENORRHŒA, or painful menstruation, may be caused by constipation, painful contractions of the womb, general inflammation due to infection of some kind of micro-organism or germ, or want of care

during the stages of menstruation of which we have already spoken.

AMENORRHŒA means the absence or insufficiency of flow, and is usually due to ill-health, such as anæmia.

MENORRHAGIA means excessive flow, and may also be traced to anæmia.

Sometimes great pain is experienced through some organic trouble; for instance, if there is not a free passage from the womb the retention and decomposition of the menstrual blood poisons the general circulation, which is really the explanation of the popular saying of "blood going to the head."

In these days, when we are so short of medical men, it is the bounden duty of every woman to watch her health and reserve her strength by all means that lie in her power, but at the same time the effects of industry must not be neglected nor the "broken" women forgotten.

There are two other subjects I would mention, not only because I am interested, but of which I feel it to be my duty to speak, when so unique an opportunity to reach a number of women presents itself.

The first is self-abortion. Any woman

who takes an intelligent interest in her fellow-creatures cannot fail to see how very much this is on the increase. Some women seem to be fortunate enough to bring about repeated abortions and miscarriages without apparent injury to themselves, but, believe me, such work can only have one end, and that is to destroy health and eventually life itself.

So much for the woman: as for the child, well, we can truly say of that, "It is the slaughter of the innocents."

The little thing, ovum or embryo, I care not what you call it, is robbed of its right to live, for I contend such right is given from the moment of conception; the fact that breath is not yet in the body does not alter my opinion of the argument in the least, but the fact that a human frame is developing in readiness for a soul confirms it.

In the second subject my words are for the middle-aged worker, and the disease I would speak of is CANCER.

This is very much on the increase, and there can be no doubt that it is at the "change of life" that cancer of the womb especially develops. The symptoms

are pain, hæmorrhage, and discharge, followed by a yellow earthy appearance of the skin, and if women would only be examined when they discover these symptoms many valuable lives and a great deal of suffering might be saved.

Unfortunately there is a popular idea that the change of life is signified by profuse and irregular discharge and bleeding, but this is erroneous and misleading.

Bleeding after the periods have ceased, and especially if accompanied by a bad-smelling discharge, is always a sign of something wrong, and medical advice should be sought without delay.

I feel I have only touched on the fringe of these subjects, but if I can implant in your minds the wish for more knowledge I shall feel my little talks have not been in vain.

CHAPTER IX

SYPHILIS AND MORAL HYGIENE

"Ravaged and marred by that terrible thing
That is death in life, and life's worst sting."
JOHN OXENHAM

I MAKE no apology for this "talk," for in my crusade of health I have no room in my mind for prudish people. There is too much at stake, the subject is of national importance, and I am of opinion that these so-called social diseases of civilization should be brought into the fresh air and daylight of healthy discussion.

Diseases of civilization indeed! More shame to us that they should be so prevalent in a people designated "civilized"!

To discuss emotions and passions having a sexual origin in an impartial manner, and to try to investigate the causes which may contribute towards making them take a form disastrous to the individual and dangerous to the general public, would seem to some

people an immodest and unpleasant task, but I have no qualms in that direction, because, girls, I want to help you, if I can, and I am going to talk to you of this moral hygiene in a homely way.

The two diseases in which we are specially interested are known as SYPHILIS and GONORRHŒA, and you know quite well, without any explanation from me, that they are the results of an immoral life.

Do not mistake me, I am speaking generally, and not in regard to those women who habitually live a loose life; that is not a question for me to discuss here, but I am speaking rather to the thoughtless, frivolous, and unprotected, and also to those who, alas! though rational enough in mind and behaviour, still run the risk of infection from these vile diseases for lack of knowledge—for it is one of life's ironies that the innocent as well as the guilty run equal risks.

Until recently, the blame has always been put on woman, she has been looked upon as the aggressor and man as the sufferer, but now any steps to check these diseases must be applied to the sexes equally.

Now these two diseases are quite distinct, the only point of resemblance being that they are both contagious—that is, they are transmittible to others by contact.

They may be contracted by contagion direct or indirect, such as kissing an infected person, by using surgical and dental instruments, by razors, combs, and brushes, drinking vessels, pipes, towels, water closets, or even industrial implements.

The number of people of both sexes suffering from gonorrhœa is appalling, and a woman who contracts the disease is very soon the subject of chronic ill-health, and her children victims of prematurity, ophthalmia, revolting skin diseases, malformations, and wasting.

The germ is able to penetrate between the cells of any delicate membrane, and in women attacks the urethra or entrance to the bladder, the vagina or passage, and the vulva or external organs.

It may also spread with disastrous consequences to the rectum, kidneys, ovaries, and uterus.

The incubation period, which means the period between the time when the disease is

contracted and the time when the symptoms begin, is usually four to five days, and the first symptoms are itching with burning sensations on micturition (passing urine), a thick yellow discharge from the vagina with inflammation, and sometimes an abscess on the outer parts.

In its acute stage the disease lasts from four to six weeks, but if it becomes chronic it is obstinate, prolonged, and extremely difficult to cure.

SYPHILIS.—In this the first sign of the disease is the appearance of a small pimple or sore a few days after infection.

In a male it is obvious, but in a female it may be so small as to escape detection.

During this stage, even although the person affected is not conscious of anything much the matter, any secretion will, if it comes in contact with an abrasion or crack on a non-infected person, cause that person to become infected.

About six weeks later secondary symptoms develop, rashes appear on the body, the throat becomes sore, swollen, and ulcerated, the hair may fall out, and there may be inflammation of the eyes, feverishness, loss of appetite, and anæmia.

The secretion from the throat is highly infectious, and a person so afflicted is a danger to the general public.

After these symptoms there is a lull for some months, and then what is known as tertiary symptoms appear. They consist of deep ulcerations which may come in any part of the body, but especially in the palate, tongue, and liver, and gummata or hard lumps occur in the muscles or along the shin bones.

These may break down, forming large sores.

The fourth stage takes the form of general paralysis of the insane, aneurism of the aorta, locomotor ataxy, some chronic diseases of the nerves, blood-vessels, and internal organs, but, worst of all, terrible face disfigurements, such as the disappearance of the nose.

Women have repeated miscarriages or give birth to children who die early, or, if they live, are pitiful specimens of suffering humanity, and would be better dead.

I think I have gone far enough into the subject to convince you of its vileness, and I would impress upon you girls the risks

you run in thoughtless relations with the opposite sex.

It is a terrible thing to be a source of filthy infection, and nothing short of criminal to be one knowingly and regardless of injury to others.

Men and women are afraid to admit they have these diseases, because they know it is evidence of wrong-doing which often enough has not even been suspected, and so the germs are cast abroad through utter neglect, and innocent people suffer the consequence. Treatment of these diseases becomes difficult and less effectual with the lapse of time, therefore I do hope you understand that advice should be sought immediately after the infection is discovered—skilled medical advice, mind you, not quacks or quack advertisements.

So many women, and men too, have yet to learn what it means to live clean, temperate lives, and that to be a party to a life of sexual pleasure is a disgrace and ruin not only to the individual, but to the country.

Let men learn to respect the bodies of the women, but—let women learn to deserve as well as to demand that respect.

That is where the strong-minded woman of to-day scores. She sees the filth and misery of wrong breeding as well as the beauty of right breeding, she uses her brain and takes an intelligent interest in the doings of the world, which helps to put passion, as such, very much in the background.

To those already infected with these diseases I have a few words to say. It may be hard for the hopelessly incurable to deny themselves the pleasure of becoming parents, but it is questionable if this self-denial brings more suffering to their nature than the early death of children brings upon them, while their moral faculties must upbraid them for the evil they achieve by bringing into the world such pitiable specimens of humanity.

The babies do not ask to be born, poor things! Life and disease are thrust upon them.

I do believe, however, that if men and women were educated in an open manner about these evils, they could be, to a great extent, remedied, for it stands to reason that no man or woman would knowingly sacrifice years of physical comfort

for a momentary gratification of a morbid appetite.

Let us hope that in the near future these diseases, like other infectious diseases, will be made notifiable, so that prompt treatment may be given and an unsuspecting public protected. If shame there be, then let it be in the fact that such things exist, and not that we battle with what others are too indifferent or too cowardly to expose.

Our little talks are now drawing to a close, and I do hope, girls, that they have been interesting to you, and that you have learnt something both of the Science of Health and the facts of life.

Do not read them just once and then put the volume aside; I am hoping they are worthy of a better fate, and that, in the words of the old book, you will "read, mark, learn, and inwardly digest them," understanding that to feel well and to be well you must be clean in your bodies, regular in your habits, wear sensible clothing, be very particular about what you eat and drink, and, by no means least, live temperate lives both physically and morally.

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GLOSSARY OF MEDICAL TERMS

ABDOMEN.—The cavity between the chest and the pelvis.
ABNORMAL.—Unnatural.
ABORTION.—Miscarriage.
ABRASIONS.—Superficial injuries.
ABSCESS.—A collection of pus.
ACUTE.—Severe.
ADENOIDS.—Small growths at the back of the nose and throat.
ADHESIONS.—A matting together of tissues.
ALCOHOL.—Pure spirit.
AMENORRHŒA.—Absence of the flow of the menses.
ANÆMIA.—Deficiency in quality or quantity of blood.
ANTEFLEXION.—A forward position of the uterus.
ANTERIOR CHAMBER.—The portion of the eye between the cornea and the iris which contains fluid.
ANTISEPTICS.—Disinfectants.
APERIENTS.—Purgative medicines.
ASEPSIS.—A state of being free from germs.
ATMOSPHERIC.—Belonging to the atmosphere.
AUTO-INTOXICATION.—Poisoning by toxins.
BILIOUSNESS.—Connected with bile.
BLADDER.—The sac which holds the urine.
BLOOD-POISONING.—A septic state of the blood.
CANCER.—A malignant growth.
CATARRH.—Inflammation of the mucous membrane.
CHRONIC.—Lasting for a long time.
COLIC.—Severe pain in the belly.
COLLAPSE.—Prostration.

COMPRESS.—Lint or linen wrung out of water.
CONGESTION.—Increased circulation in an organ.
CONJUNCTIVA.—The mucous membrane which covers the inside of the eyelids.
CONSTIPATION.—A confined state of the bowels.
CORNEA.—The clear glass-like front of the eyeball.
DISINFECTANTS.—Substances to destroy germs.
DYSMENORRHŒA.—Painful menstruation.
ENTERITIS.—Inflammation of the small intestine.
EUGENICS.—Study of conditions that improve the human race.
FATIGUE.—Great weariness of body or mind.
GARGLE.—A liquid medicine for washing out the throat.
GASTRIC.—Relating to the stomach.
GERMS.—Microbes.
GLAND.—An organ of secretion.
GONORRHŒA.—An inflammatory and contagious condition of the outer generative organs.
HÆMOGLOBIN.—The colouring matter of the red blood corpuscles.
HAIR FOLLICLES.—A little pit in the skin in which the root of the hair is fixed.
HERNIA.—Protrusion of an organ out of its normal cavity.
HYGIENE.—Relating to health.
INDIGESTION.—Want of digestive powers.
INDUSTRIAL FATIGUE.—Great weariness owing to strenuous work.
INTESTINES.—The canal from the stomach to the anus.
IRIS.—The coloured circle surrounding the pupil of the eye.
KIDNEYS.—Organs which secrete urine.
LEUCORRHŒA.—A whitish discharge from the vagina.
MASSAGE.—Scientific rubbing.
MASTICATION.—Chewing of food.
MENORRHAGIA.—Exessive monthly flow.
MENSTRUATION.—The monthly discharge.
MICROBE.—Germ.

MICTURITION.—The act of passing urine.
NEURALGIA.—Pain in a nerve.
NEURASTHENIA.—Nervous exhaustion.
NEURITIS.—Inflammation of a nerve.
OPHTHALMIA.—Severe inflammation of the eyes.
OVARIES.—The female organs in which ova are formed.
PILES or HÆMORRHOIDS.—Enlarged veins in the rectum.
PNEUMONIA.—Inflammation of the lungs.
PROLAPSE.—The falling down of an organ.
PUS.—Matter.
PYORRHŒA.—A condition in which pus oozes from the gums around the roots of the teeth.
RECTUM.—The lower end of the large intestine.
RETROFLEXION.—A backward inclination of the uterus.
RIGOR.—Severe shivering.
RUPTURE.—Hernia.
SEBACEOUS GLANDS.—Glands which secrete oily matter.
SEPTIC.—Pertaining to sepsis.
SLOUGH.—Dead tissue.
SUPPURATION.—The formation of pus.
SYPHILIS.—A contagious moral disease.
TONSILLITIS.—Inflammation of the tonsils.
TONSILS.—Two oval bodies on either side of the throat.
TOXINS.—Poisons.
ULCER.—A sore attended by discharge.
UTERUS.—The womb.
VAGINA.—The passage leading to the womb.
VARICOSE VEINS.—Dilated and thickened veins.
VENTILATION.—The provision of a supply of fresh air.
VITALITY.—Tenacity of life.

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